



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,290	02/23/2004		22048/18	8317

1912 7590 07/09/2007
AMSTER, ROTHSTEIN & EBENSTEIN LLP
90 PARK AVENUE
NEW YORK, NY 10016

EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
----------	--------------

1774

MAIL DATE	DELIVERY MODE
-----------	---------------

07/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,290	Applicant(s) BARCOCK ET AL.	
	Examiner Betelhem Shewareged	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-12, 14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-12, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response filed on 04/03/2007 has been fully considered. The 35 USC 112 rejection has been withdrawn in view of Applicant's amendment.
2. Claims 2-4 and 7-12 are amended, claims 1 and 13 are canceled, claim 15 is added, and claims 2-12, 14 and 15 are pending.

New Rejection

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2-12, 14 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claims 14 and 15, the specification or the original claims do not provide a support for the "ozone protective layer" (see at least paragraphs 2, 25, 26, 31, 36, 38, 40, 42, 62, 65, 68 and original claim 1). In fact there is a support for a protective layer containing an organic sulphur-containing compound, a boric acid compound, and an organic compound having the claimed formula MeX or MeX₂.

Art Unit: 1774

5. For the purpose of examination, the claimed "ozone protective layer" is interpreted as a protective later containing (i) an organic sulphur-containing compound which forms complexes with metal ions, (ii) a boric acid compound, and (iii) an organic compound having the formula MeX or MeX_2 where Me is a transition metal from group VIb, VIIb, VIIIb, Ib and IIb in the Periodic Table and X is an anion of a carboxylic acid having 4 to 12 carbon atoms.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) in view of Farooq et al. (US 6,703,112 B1).

8. Ohbayashi discloses an ink jet recording sheet comprising a support and an ink absorptive layer on the support (abstract). The ink absorptive layer comprises boric acid (col. 15, line 51), metal ion compound (col. 18, line 10), and organic sulfur compound (col. 17, lines 14-31). The ink absorptive layer further comprises a binder (col. 13, line 61), antifoaming agents (col. 16, line 32), light stabilizers such as UV ray absorbers (col. 16, line 20), and/or hardeners (col. 15, line 28). The ink absorptive layer

Art Unit: 1774

may be comprised of two or more layers (col. 17, line 1), and the more than two ink absorptive layers are equivalent to the claimed protective layer, dye fixing layer and ink absorbing layer. Ohbayashi does not teach an organometallic ion compound.

9. Farooq teaches an ink jet coating composition to be provided on a support, wherein the composition comprises organometallic multivalent salt (col. 4, line 58 thru col. 6, line 56) and pigment drying agents such as aromatic carboxylic acid containing sulfonic acid group attached to the aromatic ring (col. 8, lines 32-50).

10. Ohbayashi and Farooq are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the organometallic ion of Farooq with the invention of Ohbayashi so as to take care of the pigment management function and to control the smudgeness and drying of the film (col. 3, line 25 of Farooq). Furthermore, the use of aromatic carboxylic acids along with metal ions is well known in the ink jet recording art in order to serve as drying agents for ink jet receptor media (col. 8, line 17).

11. Farooq does not disclose the claimed ratio of metal ion compound to organic sulfur compound. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the ratio of metal ion compound to organic sulfur compound in order to improve light fastness and minimize bleeding (col. 17, line 4 and col. 18, line 4 of Ohbayashi). A prima facie case of obviousness may be rebutted,

Art Unit: 1774

however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

Response to Arguments

12. During an interview conducted on 02/21/2007, Applicant's representative suggested that the prior arts are not combinable to teach the invention in claim 14 because the claim recites an ozone protective layer. However, the reference of Ohbayashi and the reference of Farooq are combinable for the following reason. Even though claims 14 and 15 recite an ozone protective layer, neither the specification nor the original claims provide a support for such limitation (see 35 USC 112 rejection above).

13. For the above reason claims 2-12 and 14 stand rejected and claim 15 is included in the rejection.

Conclusion


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1774

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS
July 4, 2007.


BETELHEM SHEWARAGED
PRIMARY EXAMINER